

Public Workshop on the Emergency Levee Erosion Repair Project



Woodland, California
June 7, 2006



US Army Corps
of Engineers ®

Items to be Discussed

- **Purpose of Public Meeting**
- **Overall Project Description**
 - Background
 - Estimated Schedule
- **Woodland area critical erosion sites**
 - Specific sites: Cache Creek levee miles 0.8, 1.1 & 2.4; Sac River miles 69.9, 72.2, 85.6 & 99.3
 - Repair Designs
 - Photographs of affected sites
 - Repair Schedules
 - Routes
 - Material quantities
 - Environmental Issues
- **Where to get additional information**
- **Q & A**

Purpose of the Public Workshop

- Inform local community and general public about the project work
- Answer questions from the public
- Discuss the potential for other levee repairs

Notified Stakeholders of Public Meetings

- **Federal Elected Officials - Senate and House of Representatives;**
- **State Elected Officials - Governor, Senate and Assembly;**
- **County Officials - Board of Supervisors, County Administrators;**
- **City Officials - City Councils, City Managers;**
- **Federal Agencies;**
- **State Agencies;**
- **Water Agencies - Water Districts, Irrigation Districts, Water Companies, etc.**
- **Reclamation Districts**
- **Business Organizations - Chambers of Commerce, BIA, etc.**
- **Community Organizations - Farm Bureaus, RCRC, Port of Sacramento, etc.**
- **Environmental Organizations - Nature Conservancy, Friends of the River, etc.)**
- **General Public – Advertisements in local and regional newspapers.**

Background

Central Valley Flood Control System Projects:

- **2.5 million people**
- **2 million acres of cultivated land**
- **200,000 structures with an estimated value of \$57 billion**

The system is aging and under funded



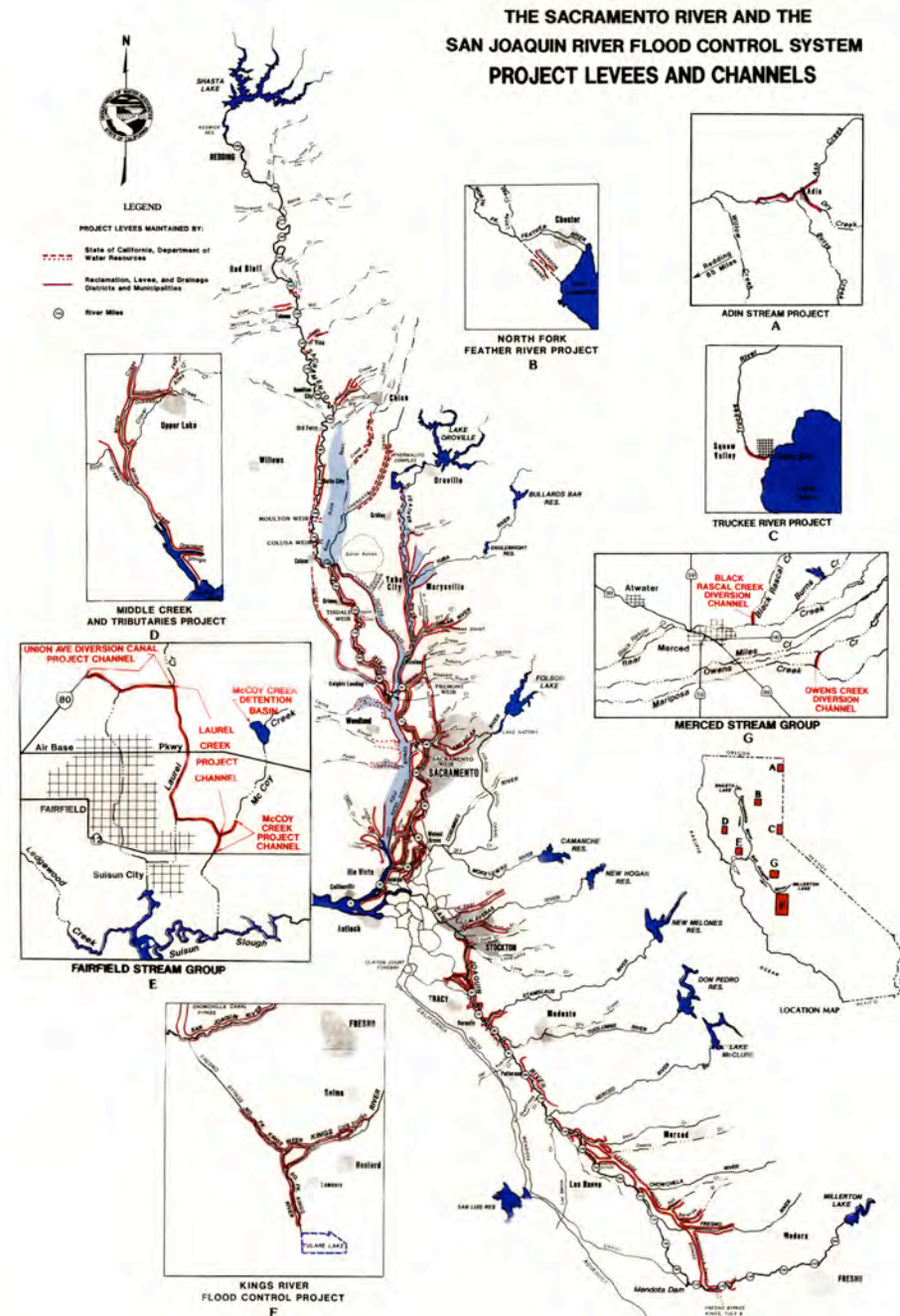
KEY CHALLENGES IN CENTRAL VALLEY

1600 miles of Federal Project Levees
 700 miles of local Delta Levees
 2300 miles of Levees

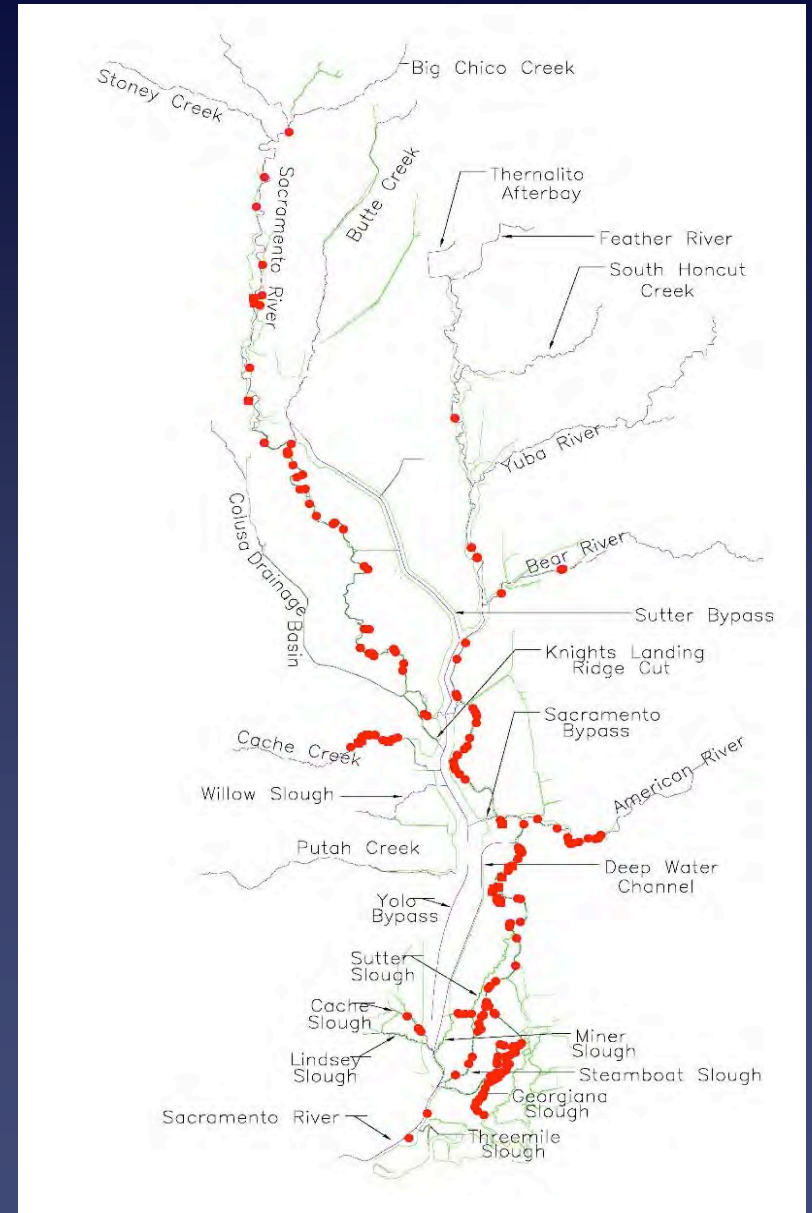
- Old levees, many originally built by farmers, most without adequate engineering



- Aging system, continuing deterioration (e.g. erosion, seepage distress, burrowing rodents)



Levee and Bank Erosion

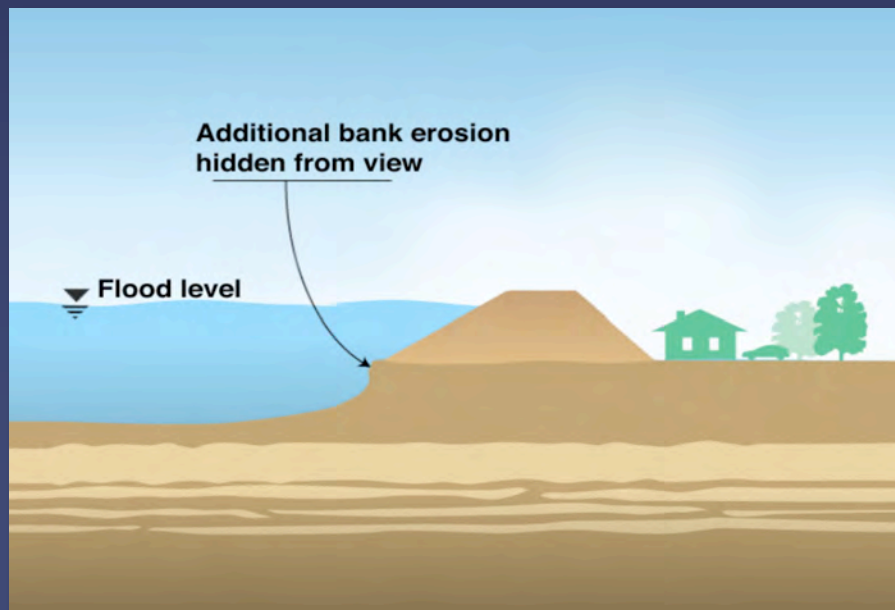
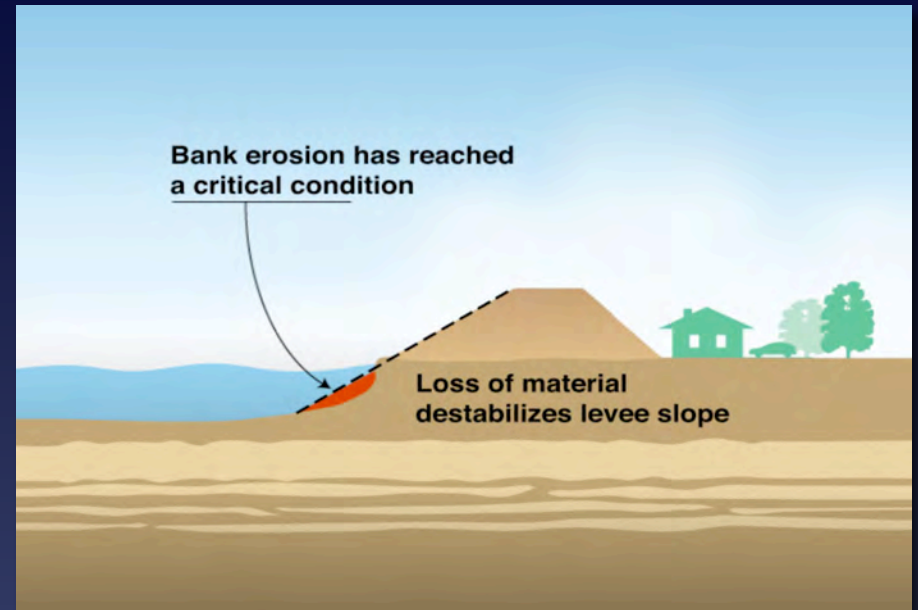


2005 US Army Corps of Engineers Field Reconnaissance Study

This December 29, 2005 Study is the basis for 24 sites on the State's levee system being identified as being "critical".

Critical sites are levee locations where the erosion encroaches near or into the levee crown and where further erosion may result in a bank failure. These sites are recommended as the highest priority for repair.

Levee Erosion



State Emergency Declaration

- Governor declared State of Emergency for State's levee system (February 24, 2006)
- Provides additional resources to fast-track the repair of critical erosion sites before the next flood season
- Streamlines California Permitting Processes



Critical Site: Sites where further erosion may result in a bank failure, which encroaches near or into the levee crown and is recommended as the highest priority for repair

24 Original Critical Sites

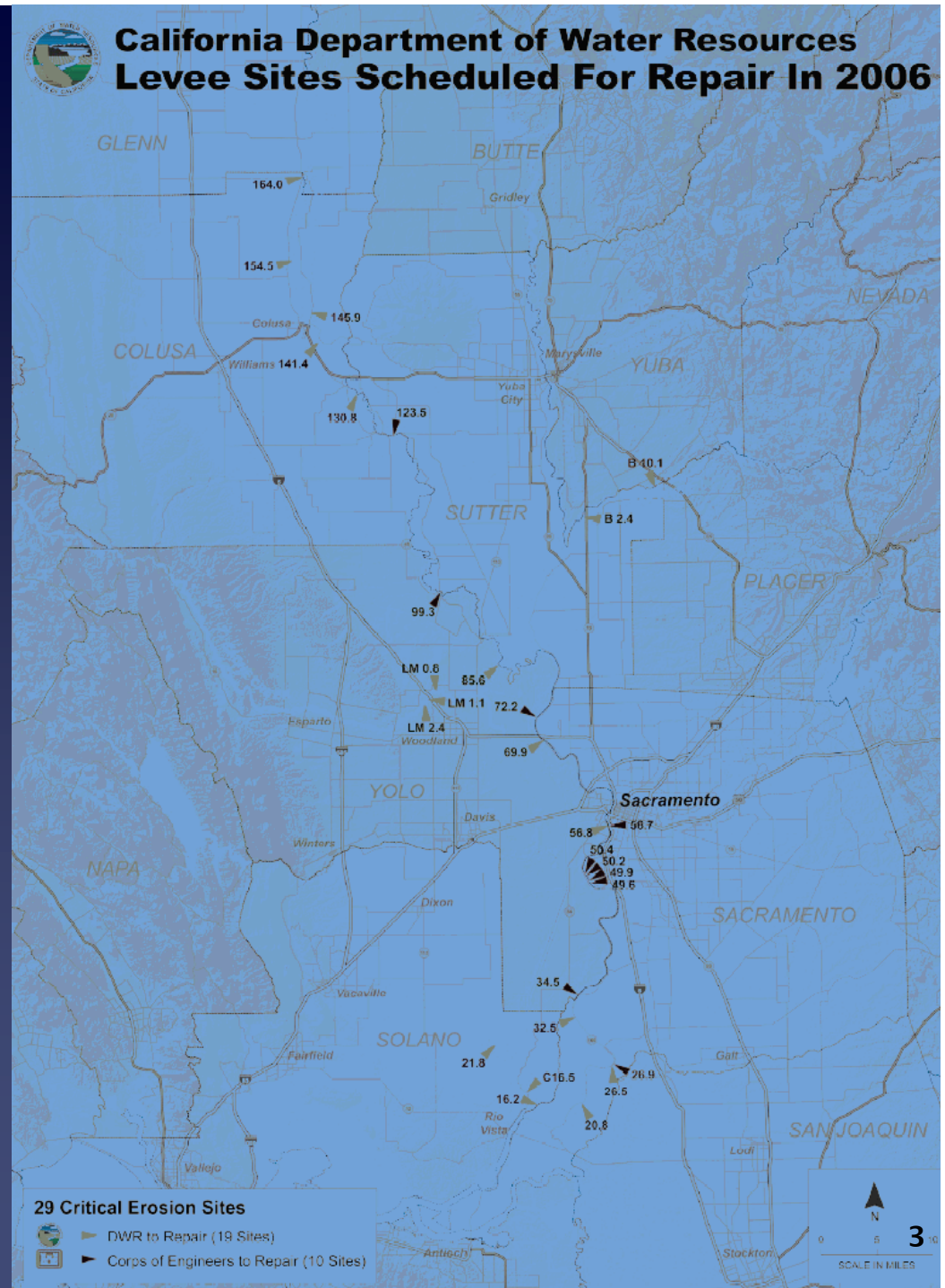
5 Additional Sites Found to be Critical
(previously potentially critical sites that have deteriorated over the last year)

29 Current Critical Sites

10 Critical Sites to be repaired by USACE

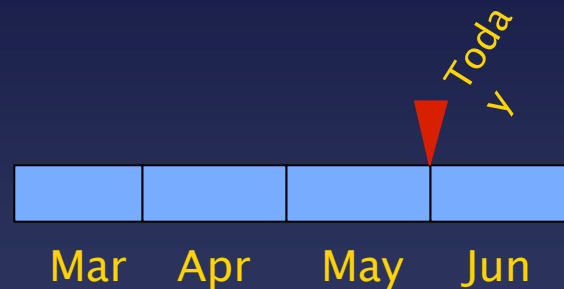
19 Critical Sites to be repaired by DWR

29 Current Critical Sites

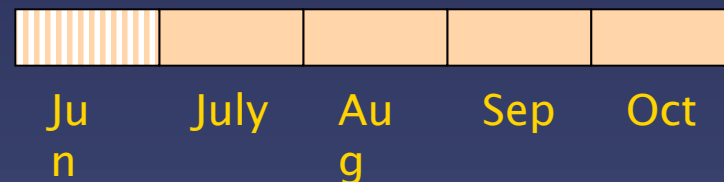


Emergency Levee Repair Project General Schedule

Design,
Right of Way,
Permitting, &
Bid & Award



Erosion Repair
Contracts



Vegetation &
Maintenance Contract

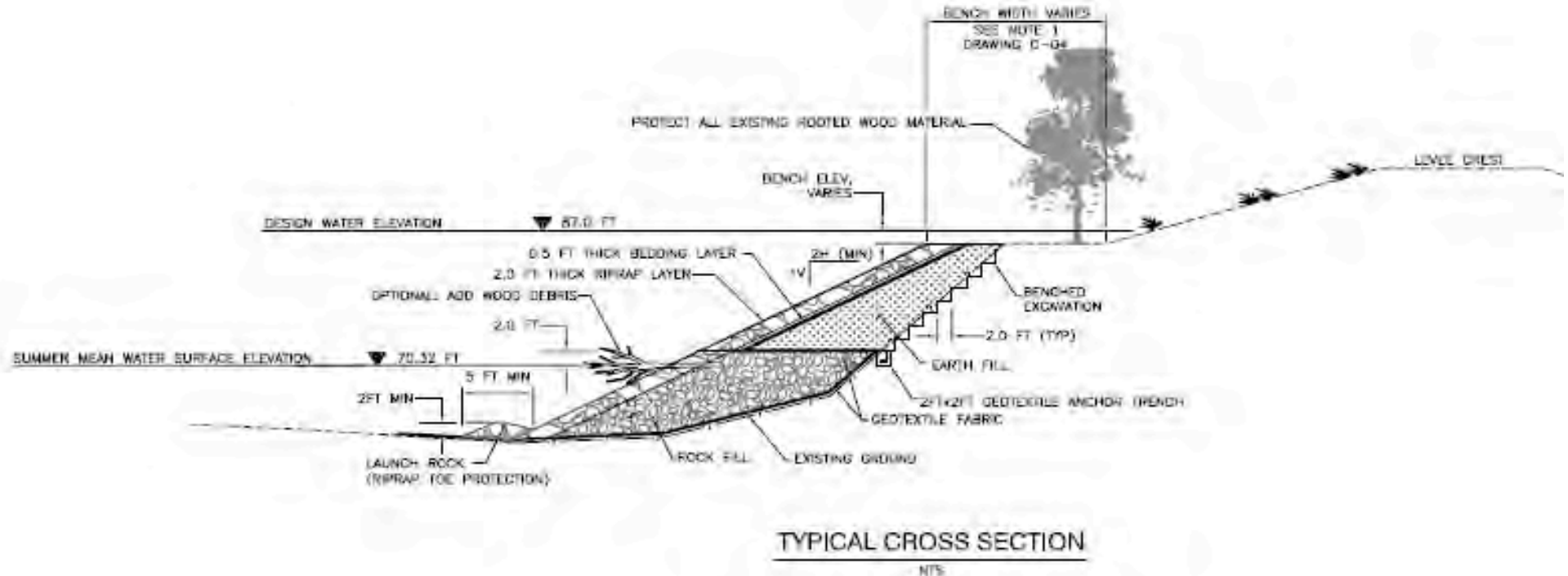


2 Types of Repairs

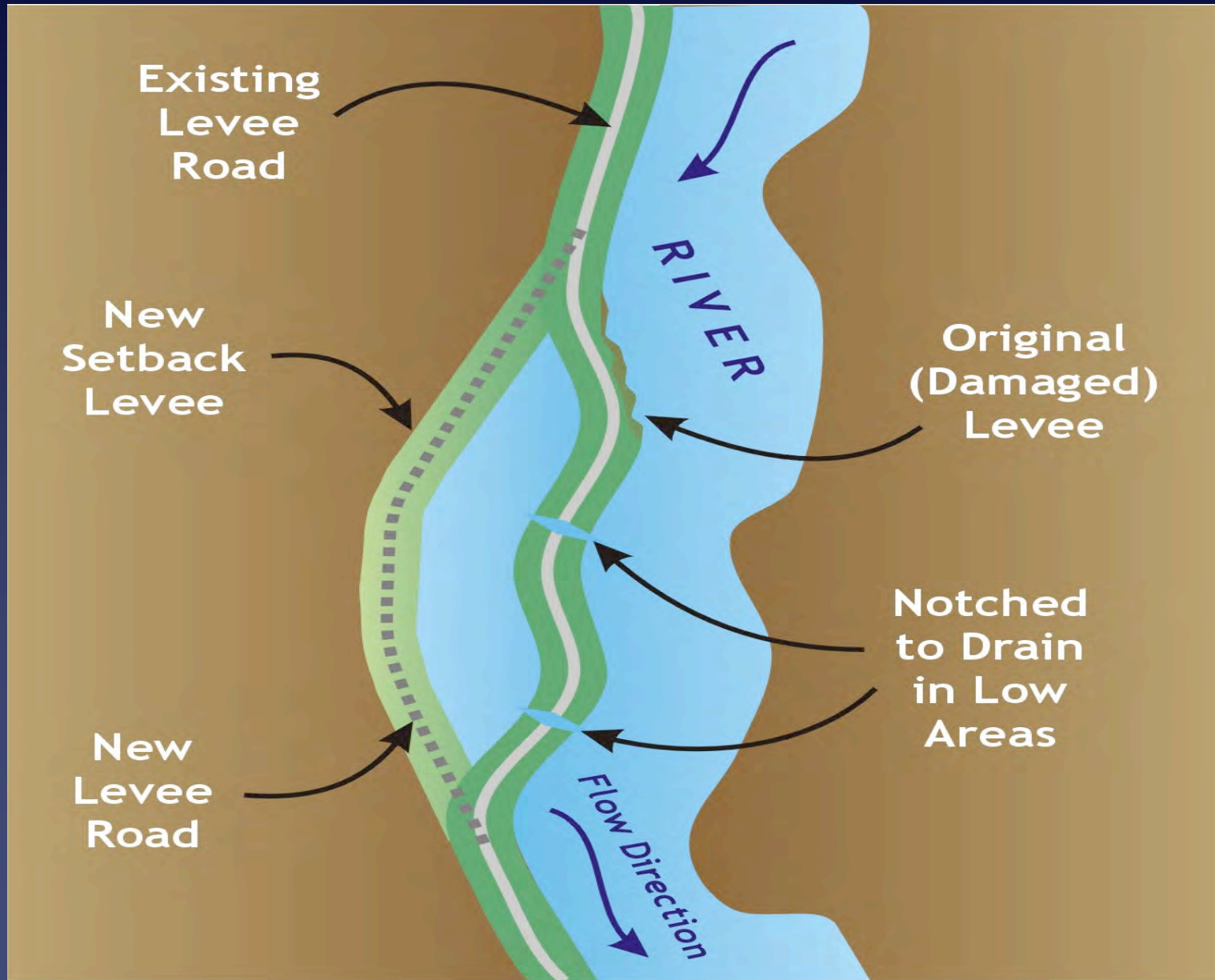
- Rock Fill -- Most repair work will consist of placing soil and rock on the water side of the levee, with the goal of reestablishing the damaged levee slope and supporting toe structure. Rock for construction will be transported to the sites by barge and/or truck.
- Setback levees -- a new levee built behind the existing levee, are planned for at least four critical erosion sites, including the three sites on Cache Creek and one on the Upper Sacramento River.

Typical Rockfill Repair Design

Sites 69.9, 72.2, 85.6 & 99.3



Typical Setback Levee Design



Environmental Issues and Permits

Endangered Species – U.S. Fish and Wildlife Service

- **Delta Smelt (and critical habitat)**
- **Valley Elderberry Longhorn Beetle**
- **Giant Garter Snake**

Endangered Species – National Oceanic & Atmospheric Administration Fisheries Service

- **Winter Run Chinook (and critical habitat)**
- **Spring Run Chinook (and critical habitat)**
- **Steelhead (and critical habitat)**
- **Green Sturgeon (recently listed)**

Efforts to Protect Environment

- DWR will incorporate environmental features to mitigate impacts, including:
 - Preserve rooted vegetation in water and on benches.
 - Include woody material to preserve fish habitat and reduce erosion.
 - Avoid Valley Elderberry Longhorn Beetle habitat.
 - Pre-survey for Bank Swallow, Swainson's Hawk and burrowing owl.

Mitigation Components Example

Willow stalk
plantings

In-stream
woody
material (IWM)





Environmental Permitting and Right of Way

All environmental permits and right of way will be
secured by DWR and USACOE

Right of Way

- Goal is to work in partnership with land– owners to secure access to levee sites and/or adjacent property when necessary
- Acquisition of property
- For more information, visit the Property Owners web page at:
www.levees.water.ca.gov/owners/

Woodland Area Sites Scheduled for Repair

Cache Creek LM 0.8

Location/Truck Route:

- Interstate 5 to
County
Road 17 and County
Road 97B, which
ends
at Site 1.1

Repair type:

- Setback levee

Repair Length

- 1,000 feet

Repair Schedule:

- Designs – 05/02/06
- Advertised – 05/05/06
- Bid Award – 06/02/06
- Notice to begin – Not
before 07/16/06
- Expected completion



Cache Creek LM 1.1

Location/Truck Route

- Interstate 5 to County Road 17 and County Road 97B, which ends at Site 1.1

Repair Type

- Setback Levee

Repair Length

- 800 feet

Repair Schedule

- DWR Repair Site
- Designs – 05/02/06
- Advertised – 05/05/06
- Bid Award – 06/02/06
- Notice to begin – Not before 07/16/06
- Expected completion –



Cache Creek LM 2.4

Location/Truck Route

- Interstate 5 to County Road 17 to 5th Street, to Washington Street to levee road; or, same as above but continue onto 1st street, right on Jackson Street, left on County Road 98B, right on County Road 17, right on County Road 98A to private driveway to project site.

Repair Type

- Setback Levee

Repair Length

- 900 feet

Repair Schedule

- DWR Repair Site
- Designs – 05/02/06
- Advertised – 05/05/06
- Bid Award – 06/05/06
- Notice to begin – 06/15/06
- Expected completion –





Sacramento River Mile 69.9

Location/Truck Route

- Interstate 5 to County Road 22B, to County Road 22, which turns into Old River Road, continue approximately 1 mile; County Road 117 from County Road 22 also may be used.

Repair Type

- Rock fill (barge)

Repair Length

- 2,000 feet

Repair Schedule

- DWR repair site
- Designs – 05/30/06
- Advertised – 06/02/06
- Bid award – 06/23/06
- Notice to begin – 07/07/06
- Expected completion – 11/01/06



Sacramento River 72.2

Repair Type

- Rock fill (barge)

Repair Length

- 1,500 feet

Repair Schedule

- U.S. Army Corps of Engineers repair site
- Designs – 05/23/06
- Advertisement – 05/26/06
- Bid Award – 06/28/06
- Notice to Begin – 06/30/06
- Expected completion – 11/01/06

Sacramento River Mile 85.6

Location/Truck Route

- Interstate 5 to County Road 102, to County Road 16 to County Road 116-B

Repair Type

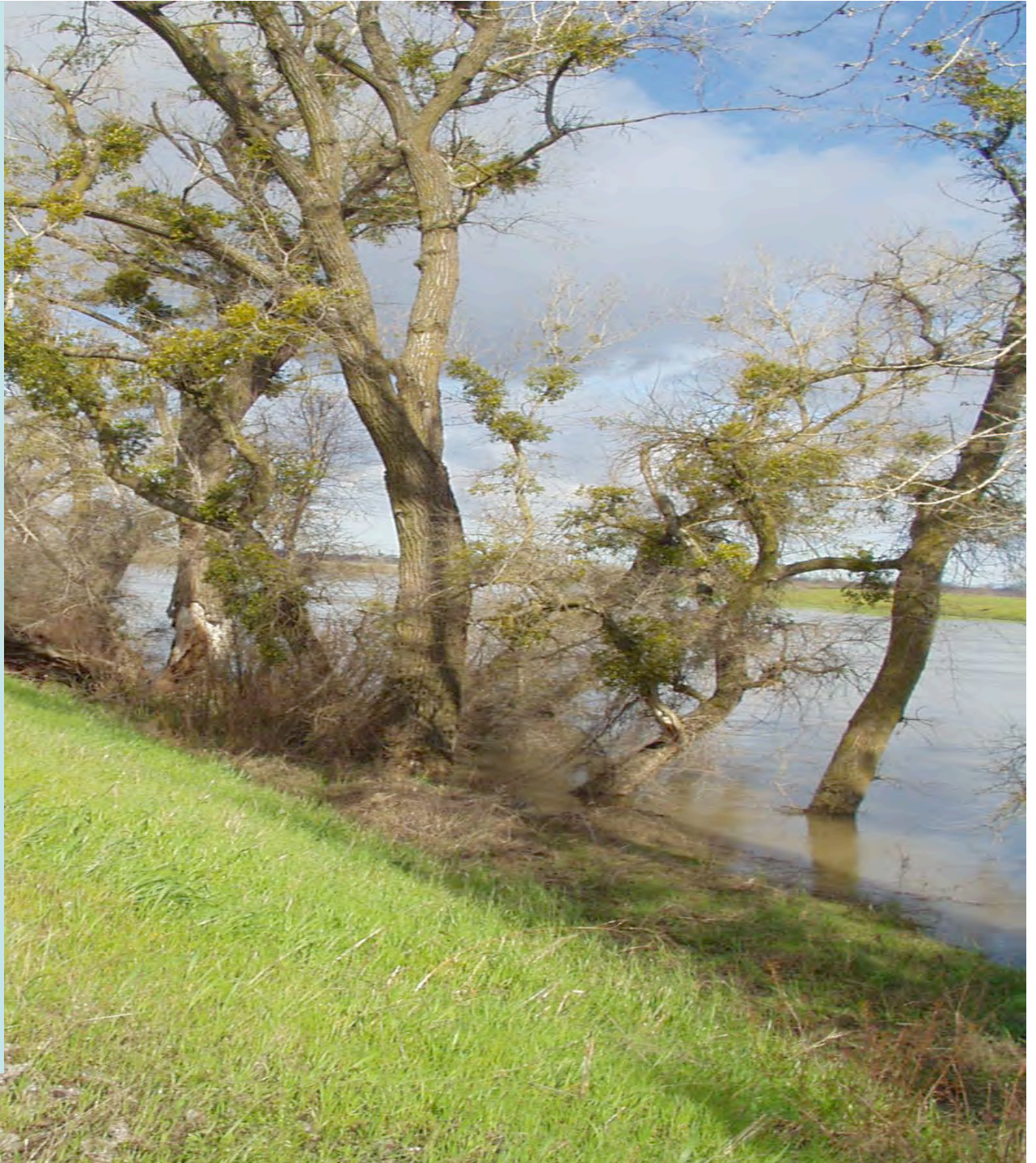
- Rock Fill (barge)

Repair Length

- 800 feet

Repair Schedule

- DWR Repair
- Designs – 05/16/06
- Advertisement – 05/19/06
- Bid Award – 06/14/06
- Notice to Begin – 06/23/06
- Expected completion – 11/01/06





Sacramento River Mile 99.

Location/Truck Route

- Highway 49 to 98a.

Repair Type

- Rock Fill (truck)

Repair Length

- 150 feet

Repair Schedule

- U.S. Army Corps of Engineers repair site
- Designs – 05/23/06
- Advertisement – 05/26/06
- Bid Award – 06/28/06
- Notice to Begin – 06/30/06
- Expected completion – 11/01/06

Material Quantities

Cache Creek Sites:

- LM 0.8
 - 2,500 cubic yards embankment material (167 truck trips)
 - 275 tons aggregate base (14 truck trips)
- LM 1.1
 - 4,700 cubic yards embankment material (314 truck trips)
 - 525 tons aggregate base (27 round trips)
- LM 2.4
 - 6,400 cubic yards embankment material (427 truck trips)
 - 250 tons aggregate base (13 round trips)

Note: Embankment material estimates 15 CY per truck load; Aggregate estimated 20 tons per truckload.



Material Quantities – Cont.

Sacramento River Sites:

- **69.9**
 - 83,000 tons of rock material (42 barge trips)
- **72.2**
 - 64,000 tons of soil and rock material (32 barge trips)
- **85.6**
 - 92,700 tons of soil and rock (47 barge trips)
- **99.3**
 - **21,000 tons of soil and rock material (11 barge trips)**

Note: Total estimates of trips based on barge holding 2,000 tons of material;
typical truck loads are 20 tons.



Typical Hours of Construction

Cache Creek Sites 0.8, 1.1, & 2.4

- 7 a.m. to 3:30 p.m., Monday through Friday

Sacramento River Site 69.9

- 7 a.m. to 7 p.m., Monday through Saturday

Sacramento River Site 85.6

- 7 a.m. to 7 p.m., Monday through Saturday

Sacramento River Sites 72.2 & 99.3

- 7 a.m. to 6 p.m., Monday through Saturday

Note: At many sites, contractor are expected to extend work hours for some durations during construction period; Times listed may vary.

Yolo County Sites

Nine Sites Scheduled for Repair

- Cache Creek Sites LM 0.8, 1.1 & 2.4
- Sacramento River miles 34.5, 56.8, 69.9, 72.2, 85.6, 99.3

Additional Sites – Proposed by local officials as critical

- Huff's Corner – Located on Cache Creek across from site LM 2.4
 - Non-project levee
 - Owned by County of Yolo
 - DWR met with county officials on Tuesday, June 6, to discuss repair options
 - County has designs underway
- Site 43.1
 - Located in Yolo County (near Clarksburg)
 - DWR survey found significant erosion
 - DWR considering adding to repair list
- Site 56.1
 - Located in West Sacramento
 - DWR survey found significant erosion
 - DWR considering adding to repair list
- State will pursue remedies with local officials
- State/County reviewing funding sources/options

Project Managers

- DWR Executive Sponsor, DWR Deputy Director *Les Harder*
- DWR Project Manager, *Don Kurosaka*, donk@water.ca.gov
 - URS Project Manager, *Loren Murray*,
loren_murray@urscorp.com
 - Design/Construction Manager, *Ron Lee*,
lee@water.ca.gov
- USACOE Project Manager, *Stan Wallin*,
Stan.J.Wallin@spk01.usace.army.mil

**For More Information
visit DWRs Levee Website at:**

www.levees.water.ca.gov/

<http://www.water.ca.gov/>

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**DWR Levee Repair
Department of Water
Resources**

1416 Ninth Street
Sacramento, CA 95814

Mailing Address:
P. O. Box 942836
Sacramento, CA 94236



DWR Levee Repair Home - News and Information

"Increasingly severe weather systems each season have accelerated the deterioration of the state's levee system to the point where they are now in danger of failing during the next major rainfall or earthquake. This worsening situation creates conditions of extreme peril to the public and property protected by the levees, to the environment, and to the very foundation of California's economy."

-- Gov. Arnold Schwarzenegger in a letter to
President Bush dated February 27, 2006



Invitation to Contractors -- DWR has scheduled a contractor outreach workshop at 9 a.m. Monday, May 8 to provide an overview of the Emergency Levee Erosion Repair Project and explain the process for applying for construction contracts to prospective contractors. (05/03/06)

► [more...](#)



State-Federal Agreement on Levee Repairs -- Governor Schwarzenegger and the Bush Administration have finalized an agreement for an expedited permitting process to fix 29 critical levee sites in the Sacramento River basin by November 1, 2006. (05/03/06)

► [Blog Post...](#) ► [Press Release...](#) ► [MOU...](#) (.pdf)



Five Levee Sites Added to Critical Erosion List -- Following Governor Schwarzenegger's plan to restore California's failing levees, DWR has added five levee sites to its critical erosion list. This brings the total number of

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Mike Chrisman**
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Related Links

- [Levee News Archive](#)
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- [Governor's Emergency Declaration](#)
- [Governor's Executive Order](#)
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Questions & Answers

Thank you



US Army Corps
of Engineers ®